

REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-19 are presently pending in this application, Claims 5-18 having been withdrawn from further consideration by the Examiner.

In the outstanding Office Action, Claims 1-4 and 19 were rejected under 35 U.S.C. §102(b) as being anticipated by Strandberg (U.S. Patent 6,323,435).

Briefly recapitulating, Claim 1 is directed to a multilayer printed wiring board and recites: “a core substrate; a first conductive layer formed on the core substrate; an interlayer insulation layer formed on the first conductive layer and the core substrate; and a second conductive layer formed on the interlayer insulation layer, wherein the first conductive layer on the core substrate has a thickness which is larger than a thickness of the second conductive layer on the interlayer insulation layer, and the first conductive layer on the core substrate has a side face which is tapered such that an angle, Θ , formed by a straight line connecting the top end and bottom end of the side face of the conductive layer and a horizontal face of the core substrate satisfies $2.8 < \tan \Theta < 55$.”

The Office Action maintains that Claim 1 is anticipated by Strandberg because “it would have been reasonable for a person of ordinary skill in the art at the time of applicant’s invention to consider the thickness of the traces on the core substrate and that on the interlayer insulation layers are show proportionately in a same figure.” However, it is respectfully submitted that “proportions of features in a drawing are not evident of actual proportions when drawings are not to scale.”¹ Furthermore, MPEP states that “[w]hen the reference does not disclose that the drawings are to scale and is silent as to dimensions,

¹ MPEP 2125.

arguments based on measurement of the drawing features are of little value.”² As presented in the previous response, Strandberg does not include an indication that its drawings are drawn to scale, and it is evident that the figures in Strandberg are not drawn to represent any scales comparable to their actual embodiments. Specifically, Strandberg specifically states that the conductive traces 14a, 14b in Figs. 1-5 typically have a thickness in the range of 20 μm to 30 μm .³ Similarly, referring to Fig. 6 in Strandberg, the measurements of the conductive layers on the core substrate and the insulation layer would be 6.5 mm and 3.5 mm, respectively, if the drawing in Fig. 6 is measured as in the Office Action, but Strandberg again specifically states that the wiring pattern on the substrate 112 has a thickness in the range of 10 μm to 20 μm .⁴ That is, despite the fact that the conductive traces in Fig. 3 and the conductive pattern in Fig. 6 ought to have different thicknesses, they are drawn as having the same thickness in the drawings. Consequently, nowhere is Strandberg believed to teach or suggest the thickness relationship or the angle Θ as recited in Claim 1. Also, as discussed in the previous response, according to Strandberg, it is believed that the conductive pattern on the surface 112a of the substrate 112 should be made much thinner with much less filler to provide a lower dielectric constant to the structure and thus a lower impedance.⁵ As such, it is believed that Strandberg leads away from the “first conductive layer on the core substrate [which] has a thickness which is larger than a thickness of the second conductive layer on the interlayer insulation layer.”

Based on the foregoing discussions, Applicants respectfully submit that Strandberg does not teach or suggest “a first conductive layer formed on the core substrate ...; and a

² Hockerson-Halberstadt, Inc. v. Avia Group Int’l, 222 F.3d 951, 956, 55 USPQ2d 1487, 1491 (Fed. Cir. 2000) (The disclosure gave no indication that the drawings were drawn to scale. “[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue.”).

³ See Strandberg, column 8, lines 4-9.

⁴ See id., column 9, lines 16-23.

⁵ See id., column 9, lines 23-34.

second conductive layer formed on the interlayer insulation layer, wherein the first conductive layer on the core substrate has a thickness which is larger than a thickness of the second conductive layer on the interlayer insulation layer, and the first conductive layer on the core substrate has a side face which is tapered such that an angle, Θ , formed by a straight line connecting the top end and bottom end of the side face of the conductive layer and a horizontal face of the core substrate satisfies $2.8 < \tan \Theta < 55^\circ$ as recited in Claim 1.

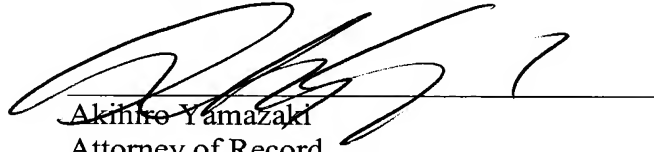
Therefore, the structure recited in Claim 1 is clearly distinguishable from Strandberg and is not anticipated thereby, and Applicants respectfully request the outstanding rejections based on Strandberg be withdrawn. Furthermore, because Strandberg fails to disclose the conductive layers as recited in Claim 1, its teachings are not believed to render the structure recited in Claim 1 obvious.

For the foregoing reasons, Claim 1 is believed to be allowable. Furthermore, since Claims 2-4 and 19 depend from Claim 1, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 2-4 and 19 are believed to be allowable as well.

In view of the discussions presented above, Applicants respectfully submit that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Akinhiro Yamazaki
Attorney of Record
Registration No. 46,155

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)

AY/mda
I:\ATTY\AKY\28s\283026\283026US_AME 2.DOC